

**UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK**

IN RE TURQUOISE HILL RESOURCES LTD.
SECURITIES LITIGATION

Case No. 1:20-cv-08585-LJL

AGREED ESI PROTOCOL ORDER
AND ORDER PURSUANT TO FEDERAL RULE OF EVIDENCE 502(d)

The parties in the above-captioned action have agreed to the terms of this Agreed ESI Protocol Order as set forth below; accordingly, it is ORDERED:

This protocol describes the specifications for the production and use of electronically stored information, such as emails, electronic documents, hard copy documents (which will be converted to an appropriate electronic format as set forth below), text messages, instant messages and chat formats, audio and video files (including voicemail recordings), and any relevant structured data sources (“ESI”).

Nothing in this Order is intended to abrogate the applicability of Fed. R. Civ. P. 26, 34 and 37, or to obviate the parties’ respective rights and obligations under such Rules.

1. DEFINITIONS

Definitions will be construed according to the Federal Rules of Civil Procedure and The Sedona Conference® Glossary: E-Discovery & Digital Information Management (Fifth Edition), available at https://thesedonaconference.org/publication/The_Sedona_Conference_Glossary (last accessed December 1, 2022).

2. SEARCH METHODOLOGY

The parties agree that they will meet and confer regarding the search terms, custodians, and date ranges (“Search Criteria”) that a Producing Party plans to use to identify ESI responsive to document requests if applicable. The parties also agree to employ reasonable sampling/testing procedures to validate any applied search terms or any automated review methodology used for that party’s own production. If a party chooses to utilize an automated or technology-assisted review methodology to automatically code documents for responsiveness, that party must disclose such review methodology to opposing counsel. The parties are required to engage in transparent and sincere negotiations regarding appropriate search terms and custodians for the discovery of

ESI that is responsive to document requests and other discovery. These discussions have already begun, and will continue throughout discovery. If good faith negotiations do not resolve all ESI questions, the parties will bring any remaining disputes to the Court for resolution.

3. CUSTODIANS

The parties will meet and confer to identify their respective custodians and data sources.

4. DOCUMENT PROCESSING

4.1 Hidden Data. The parties will, during processing, ensure that documents display the following, where available:

- i. track changes (absent special circumstances, the TIFF images should show all track changes in markup form);
- ii. hidden columns or rows (noting that hidden columns or rows exist in native Excel files is sufficient);
- iii. hidden text or worksheets;
- iv. hidden slides in native PowerPoint presentations; and
- v. comments (these should be visible on the TIFF images of the documents).

4.2 Upon request by the receiving party, the producing party must produce native copies of any documents containing hidden data.

5. DATA CULLING

5.1 Duplicates. The parties will use MD5 hash values to de-duplicate documents. The parties will apply de-duplication on a family basis. The parties will de-duplicate across custodians (“global de-duplication”). With respect to global de-duplication, the Load File will contain a metadata field (“All Custodians”) identifying all custodians who possessed exact copies of the document. The parties will not de-duplicate loose electronic documents against email attachments.

The parties will not count a document containing handwritten notes, highlighting, or any other markings as a duplicate of a non-marked or annotated version of the same document.

5.2 Date Range. The parties will meet and confer regarding the start date and end date to be applied to limit documents. The parties' discussion of date range will include the issue of whether, if any of the fields Date Sent, Date Received, Date Created, Date Last Modified, and/or Date Last Printed (if such metadata is available for a given document) fall within the or a specific date range, a document will be included.

5.3 Search Terms. The parties will meet and confer regarding the search terms to be applied to limit documents. If any family member hits on a search term, the entire family must be included for review purposes. To the extent one or more documents in any family are responsive to any document request, the entire family must be produced, with the exception that privileged material may be redacted or withheld. The parties must run optical character recognition ("OCR") conversion on non-searchable PDF files and other stand-alone files and email attachments that do not have searchable text in order to make them searchable before running the searches. The parties further agree that applying the agreed-upon search terms to a given party's collection of ESI does not by itself satisfy that party's obligations in responding to specific discovery requests; there may be categories of documents requiring collection other than by application of search terms, including without limitation documents that cannot be effectively searched following OCR conversion.

5.4 The parties agree that search terms, custodians, data sources and/or date ranges may need to be adjusted or supplemented as discovery proceeds. The parties will meet and confer in a timely fashion regarding any additional search terms, custodians, data sources and/or date ranges.

6. PRODUCTION

6.1 Media. Any production may be produced via FTPS or HTTPS site. Otherwise, the parties will deliver each production on a CD, DVD, or USB flash drive using overnight delivery, or if a delivery is too large to fit on two CDs, DVDs, or USB flash drives, the production will be delivered via an external hard drive using overnight delivery. If any productions are made via physical storage hardware (including, but not limited to CDs, DVDs, USB flash drives, laptop computer, and/or external hard drives) such hardware shall be encrypted or password-protected prior to exchange. The production media should be labeled with:

- i. the producing party's name;
- ii. the case name and number;
- iii. the production volume; and
- iv. the Bates number range.

6.2 Production Format. Any files not produced in native form shall be produced as tagged image file format ("TIFF") images accompanied with an image load file, a data load file, and document-level searchable text.

- i. Image Requirements. A TIFF image converted from native file shall be produced as follows:
 1. All images shall be group 4 black and white 300 dpi TIFF files named according to Bates number (although a party may request a document be produced in color if required to understand its content);
 2. Requested color images will be produced in JPG format;

3. Hidden content, tracked changes or edits, comments, and other similar information viewable within the native file shall also be imaged so that such content is viewable on the image;
 4. Bates numbers and confidentiality designations shall be branded to the images so that the numbers and designations print;
 5. If a Bates number or set of Bates numbers is skipped in a production, the producing party will so note in a cover letter or production log accompanying the production;
 6. Images shall be single page TIFFs (one TIFF file for each page); and
 7. Each TIFF image should be assigned a Bates number that is unique and maintains a constant length across the entire document production (i.e., padded to the same number of characters).
- ii. Data Load File Requirements. The parties will produce a Relativity-compatible .dat load file with standard Concordance delimiters with each production volume. The data load file will contain all fields listed on Appendix A with a header row describing each field. The parties will also produce an Opticon-compatible .opt file to provide paths to individual Bates-numbered TIFF and JPG files.
1. The parties are not obligated to produce metadata from a document if metadata does not exist or if the metadata is not machine extractable, except that the parties will produce custodian metadata for hard-copy documents to the extent that a custodian is reasonably known or can be assigned.

iii. Extracted and OCR Text Requirements. The parties will provide electronically extracted text for ESI. The parties will provide OCR text for documents that do not contain electronically extractable text, for redacted documents, and for hard-copy documents.

1. The parties will provide document text as separate, document-level text files not embedded in the metadata load file; and
2. The parties will name each text file with the unique Bates number of the first page of the corresponding document, followed by the extension “txt.”

6.3 Native Production. The parties will produce presentations (i.e., PowerPoint), Excel and/or CSV spreadsheets, Deswik (including without limitation Deswik Mine Planning Software), Primavera P6, Primavera Risk Analysis, Prism (including without limitation Prism estimating system, Prism cost control system, and Prism cost management system), Clash analyses, SAP systems, Schedule .XER files, and any other scheduling or program files in native form to the extent these files are possessed by the producing party in native form. The parties will replace the TIFF image with a document placeholder containing a unique Bates number and language sufficient to convey that the document was produced in native form, along with any applicable Protective Order designation. The text file will contain the extracted text of the native file. Should any TIFF images not be legible, the parties will work together to provide native versions of such documents on a case-by-case basis.

- i. The parties will name each native file with the unique Bates number of the first page of the corresponding document, followed by the appropriate extension (“xls,” “csv,” or “ppt”, etc.);

- ii. The parties will provide a path to each native file in the data load file;
- iii. When redaction is necessary, a redacted full TIFF version may be produced instead;
- iv. When documents of file types such as audio files, DWG files, AutoCAD files, Access databases, Microsoft Project files, Log files, and the like cannot be converted to image files or cannot be converted without undue burden and/or expense, such documents may be produced in native format with placeholders; and
- v. The requirements of Paragraph 6.2(ii) apply equally to all documents produced in native format.

6.4 Other Files. The parties will meet and confer to discuss a suitable production format for any document types not addressed herein, including, but not limited to, text messages, Bloomberg or Slack chats, audio files, and messages from other platforms.

6.5 Bates Numbering. The Bates number and any confidentiality designation should be electronically branded on each produced TIFF image of ESI. For documents produced in native format, the Bates number and confidentiality designation should be electronically branded on the document placeholder.

6.6 Prior Productions. Notwithstanding the above, documents previously produced to a third party in any other proceeding, investigation, or inquiry concerning the Oyu Tolgoi project and already formatted for production can be produced in the manner they were previously produced to the third party (although also Bates stamped for production in this case). The producing party shall also provide any information concerning production formatting and/or specifications to the extent needed by the receiving party to process, use, or interpret the previously

produced documents. Notwithstanding the foregoing, the parties expressly reserve all objections to any such request for documents.

6.7 Productions from Databases, Structured Data, or Scheduling, Risk Geotechnical or Similar Analysis Platforms. To the extent a response to discovery requires production of ESI contained in a database, structured data, or scheduling, risk or similar platform, the parties agree that the producing party will promptly explain to the requesting party the contents and structure of the database, structured data, or platform, and the parties will then promptly meet and confer as needed to develop a method of obtaining and producing discoverable information from the database, structured data, or platform.

7. CONFIDENTIALITY

Confidentiality of documents produced will be designated in accordance with the Protective Order entered in the above-captioned case.

8. PRIVILEGE

8.1 Privilege Log. The parties will provide a privilege log that complies with Rule 26 for any document withheld in whole or in part (i.e., redacted) based upon a claim of privilege on a rolling basis within 30 days after production. The parties further agree to meet and confer regarding the production of a privilege log prior to any deposition(s) as necessary. The privilege log will include the basis of the privilege claimed ((a) AC for Attorney/Client, (b) WP for Attorney Work Product, (c) CI for Common Interest; and/or (d) OTH for Other), a description sufficient to allow the receiving party to assess the privilege claim (although for descriptions, categorical privilege designations consistent with Local Rule 26.2(c) are permitted), and detail the following for each document based on the document's metadata (where available):

- i. A fixed index/reference number for documents withheld in whole;

- ii. a Bates number for documents withheld in part (i.e., redacted);
- iii. document type;
- iv. the document date, to the extent reasonably discernible:
 - 1. for emails, this should be the sent date and time of the document;
and
 - 2. for loose ESI, this should be the last modified date of the document.
- v. if the document is an e-mail, the Subject Line of the e-mail (unless the Subject Line itself contains privileged information) and the number of attachments to the email. If a document is not an e-mail, the File Name contained in the document's metadata, if any (unless the File Name itself contains privileged information). If no File Name is available in a document's metadata, a description of the file.
- vi. the author(s) (i.e., from):
 - 1. for emails this should be populated with metadata extracted from the "Email From" field associated with the file; and
 - 2. for loose ESI, this should be populated with metadata extracted from the "Author" field; if such field contains generic information such as the company name, a party may substitute the information contained in the "Custodian" metadata field.
- vii. the recipient(s) (i.e., to, cc, and bcc):
 - 1. for emails this should be populated with the metadata extracted from the "Email To" field associated with the file. Separate columns

should be included for the metadata extracted from the “Email CC” and “Email BCC” fields, where populated.

- viii. an identification of any attachments to a document being withheld, accompanied by an indication of where such attachments appear on the privilege log or that such attachments have been produced and their respective Bates numbers.

8.2 All legal personnel will be indicated by an asterisk on the privilege log and the party that personnel represented, to the extent known or reasonably necessary to assess the privilege claim.

8.3 A party is required to include only one entry on the privilege log to identify each withheld e-mail string that constitutes an uninterrupted dialogue between or among individuals (an “E-mail Chain”). The privilege log entry for any withheld or redacted E-mail Chain must identify:

- i. That the e-mails are part of an E-mail Chain; and
- ii. The senders and recipients of all e-mails that are part of the E-mail Chain.

8.4 Privilege logs must be provided in Microsoft Excel format.

8.5 Communications exclusively between a party or its representative(s) and its counsel in this action created on or after October 14, 2020 need not be logged. Similarly, work product created after October 14, 2020 by counsel in this action, an agent of counsel in the action, or a party at the direction of its counsel, need not be logged.

9. APPLICATION OF FEDERAL RULE OF EVIDENCE 502(d)

9.1 In order to allow for expeditious production of documents, pursuant to Federal Rule of Evidence 502(d), a Party may, at its sole option, produce materials without detailed, or any, review to determine whether the production includes Privileged Material. The production of such

privileged or work-product protected documents, ESI or other information is not a waiver of the privilege or protection from discovery in this case or in any other federal or state proceeding. Nothing contained herein is intended to or shall serve to limit a party's right to conduct a review of documents, ESI or information (including metadata) for relevance, responsiveness and/or segregation of privileged and/or protected information before production. This Stipulation and Order does not preclude a party from intentionally waiving any claims of privilege or protection.

9.2 If information produced is subject to a claim of privilege or work-product protection, the party making the claim may notify any party that received the information of the claim and the basis for it. After being notified, the receiving party must (i) immediately cease the review and use of the disclosed document or information, except to the extent necessary to determine and/or contest the privilege or protection; (ii) if the receiving party does not challenge the assertion, return, sequester, or destroy the disclosed document or information, as well as any and all copies thereof; and (iii) if the receiving party does not challenge the assertion, destroy or sequester any references to the erroneously or inadvertently disclosed document or its contents.

9.3 The receiving party may move the Court for an order compelling production of the inadvertently produced information, but the motion shall not assert protection was waived as a result of inadvertent production. If a claim is disputed, the receiving party shall not use or disclose the relevant information (except as necessary to determine and/or contest the privilege or protection), until the matter is resolved by agreement of the parties or by a decision of the Court.

SO STIPULATED AND AGREED.

Dated: March 24, 2023

/s/ Corey Worcester

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*Counsel for Lead Plaintiff the Pentwater Funds and
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SO ORDERED

Dated: March 27, 2023
New York, New York



LEWIS J. LIMAN
United States District Judge

Appendix A

Field Name	Description
BatesBegin	The first page of the document
BatesEnd	The last page of the document
AttachBegin	The first page/doc of the first parent of an attachment family. (e.g., ABC000001).
AttachEnd	The last page/doc of the last attachment. (e.g., ABC000019).
Custodian	Custodian name
All Custodians	All custodians of a globally deduplicated document separated by semicolons (e.g., Doe, John; Roe, Robert).
Tag - Confidentiality	The text demonstrating the confidential level of the document (e.g., Confidential, Highly Confidential, etc.)
EM - Subject	E-mail subject
EM - To	The values in the original “To” field for emails.
EM - From	The values in the original “From” field for emails.
EM - CC	The values in the original “CC” field for emails.
EM - BCC	The values in the original “BCC” field for emails.
EM – Time Sent	Time the e-mail was sent in Eastern Standard Time
EM - Date Sent	Date the e-mail was sent
EM - Date Received	Date the e-mail was received
EM – Time Received	Time the e-mail was received in Eastern Standard Time
File - Title	Title field value extracted from the metadata of the native file
File - Document Type	A reference to the application that created the file, for example “Word Document” or “Excel Spreadsheet”
File - File Name	Original file name
File - File Path	The path the original native file (excluding name and file extension)

Field Name	Description
File - File Size	File size of the native file in bytes.
File - Date Created	Date the file was created (not applicable to e-mails that were sent or received)
File - Date Modified	Date the file was last modified (not applicable to e-mails that were sent or received)
Extracted Text Path	File path to the extracted text/OCR file, or the extracted/OCR file link (e.g. ABC001\Text\001\ABC000001.txt)
Has Hidden Excel Column	Shows if there is a hidden column in an Excel file
Has Hidden Excel Row	Shows if there is a hidden row in an Excel file
Has Hidden Excel Sheet	Shows if there is a hidden sheet in an Excel file
Has Hidden PowerPoint Slides	Shows if there is a hidden slide in a PowerPoint presentation
Native File Path	File path to the native file, or the native file link (e.g., ABC001\Native\001\ABC000001.xls)
MD5Hash	Unique "fingerprint" that exists for every document. This identifier is used for identification of exact duplicate documents.
Social media / cell phones – Participants	The participants of the text/chat, either by name or phone number (or both).
Social media / cell phones – Type	The type of message (e.g., text, chat, or other).
Social media / cell phones – Text/Chat Group	Allows grouping of all chats/texts from the same string together.
Social media / cell phones – Sender	The sender of the text/chat.
Social media / cell phones – Recipients	The recipient(s) of the text/chat.
Social media / cell phones – Handle	The username for the captured social media account.
Social media / cell phones – Name	The name associated with the social media account.